Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A mutated *Pseudomonas* exotoxin A ("PE"), wherein said PE has a glycine, alanine, valine, leucine, or isoleucine in place of arginine at a position corresponding to position 490 of SEQ ID NO:24.

2. (Original) A PE of claim 1, selected from the group consisting of PE35, PE38, PE38KDEL, PE40, PE4E, and PE38QQR.

3. (Original) A PE of claim 1, wherein said arginine at a position corresponding to position 490 of SEQ ID NO:24 is replaced by alanine.

4. (Original) A chimeric molecule, which chimeric molecule comprises (a) a targeting moiety and (b) a mutated *Pseudomonas* exotoxin A ("PE"), wherein said PE thereof has a glycine, alanine, valine, leucine, or isoleucine in place of arginine at a position corresponding to position 490 of SEQ ID NO:24.

5. (Original) A chimeric molecule of claim 4, wherein said PE is selected from the group consisting of PE35, PE38, PE38KDEL, PE40, PE4E, and PE38QQR.

6. (Original) A chimeric molecule of claim 4, wherein said arginine residue at a position corresponding to position 490 of SEQ ID NO:24 is replaced by alanine.

7. (Original) A chimeric molecule of claim 4, wherein said targeting moiety is an antibody.

8. (Original) A composition comprising (a) a chimeric molecule, which chimeric molecule comprises (i) a targeting moiety and (ii) a mutated *Pseudomonas* exotoxin A

("PE"), wherein said PE thereof has a glycine, alanine, valine, leucine, or isoleucine in place of arginine at a position corresponding to position 490 of SEQ ID NO:24, and (b) a pharmaceutically acceptable carrier.

9. (Original) A composition of claim 8, wherein said arginine residue at a position corresponding to position 490 of SEQ ID NO:24 is replaced by alanine.

10. (Original) An isolated nucleic acid encoding a mutated *Pseudomonas* exotoxin A ("PE"), wherein said PE has a glycine, alanine, valine, leucine, or isoleucine in place of arginine at a position corresponding to position 490 of SEQ ID NO:24.

11. (Original) An isolated nucleic acid of claim 10 wherein said PE is selected from the group consisting of PE35, PE38, PE38KDEL, PE40, PE4E, and PE38QQR.

12. (Original) An isolated nucleic acid of claim 10, wherein said arginine residue at a position corresponding to position 490 of SEQ ID NO.:24 is replaced by alanine.

13. (Original) An isolated nucleic acid of claim 10, wherein said nucleic acid further encodes a targeting moiety.

14. (Original) A method of inhibiting the growth of a cell bearing a target molecule, said method comprising contacting said cell with a chimeric molecule comprising a targeting moiety that binds to said target molecule, conjugated or fused to a mutated *Pseudomonas* exotoxin A ("PE"), which PE has a glycine, alanine, valine, leucine, or isoleucine residue in place of an arginine residue at a position corresponding to position 490 of SEQ ID NO:24,
wherein following said contact, said chimeric molecule inhibits the growth of said cell.

15. (Original) A method of claim 14, wherein said target molecule is an antigen and said targeting molecule is an antibody which binds to said antigen.

16. (Original) A method of claim 14, wherein said arginine residue at a position corresponding to position 490 of SEQ ID NO:24 is replaced by alanine.

17. (Original) An antibody that specifically binds CD22, said anti-CD22 antibody having a variable light (VL) chain comprising three complementarity determining regions (CDRs), and a variable heavy (VH) chain comprising three CDRs, wherein (i) said VL chain CDR1 has a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18, and 19.

18. (Original) An anti-CD22 antibody of claim 17, wherein said VL CDR1 has the sequence of SEQ ID NO:7.

19. (Original) An anti-CD22 antibody of claim 17, wherein said VH CDR3 has the sequence of SEQ ID NO:16.

20. (Original) An anti-CD22 antibody of claim 17, wherein said VL chain has the sequence of SEQ ID NO:20.

21. (Original) An anti-CD22 antibody of claim 17, further wherein said VL CDR1 has the sequence of SEQ ID NO:7 and said VH CDR3 has the sequence of SEQ ID NO:16.

22. (Currently amended) An anti-CD22 antibody of claim [[5]] 17, wherein said VH chain has the sequence of SEQ ID NO:21.

23. (Original) An anti-CD22 antibody of claim 17, wherein said VL chain has the sequence of SEQ ID NO:20 and said VH chain has the sequence of SEQ ID NO:21, except that, optionally, said VL chain has a cysteine in place of glycine at position 100 and said VH

chain has a cysteine in place of arginine at position 44, as these positions are numbered according to the "Kabat Numbering" shown in Figures 2 and 3, respectively.

24. (Original) An anti-CD22 antibody of claim 17, wherein said antibody is selected from the group consisting of an scFv, a dsFv, a Fab, or a $F(ab')_2$.

25. (Original) A chimeric molecule comprising a therapeutic moiety or detectable label conjugated or fused to an antibody that specifically binds CD22, said anti-CD22 antibody having a variable light (VL) chain comprising three complementarity determining regions (CDRs), and a variable heavy (VH) chain comprising three CDRs, wherein (i) said VL chain CDR1 has a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18, and 19.

26. (Original) A chimeric molecule of claim 25, wherein said VL CDR1 has the sequence of SEQ ID NO:7.

27. (Original) A chimeric molecule of claim 25, wherein said VH CDR3 has the sequence of SEQ ID NO:16.

28. (Original) A chimeric molecule of claim 25, wherein said VL chain has the sequence of SEQ ID NO:20.

29. (Original) A chimeric molecule of claim 25, further wherein said VL CDR1 has the sequence of SEQ ID NO:7 and said VH CDR3 has the sequence of SEQ ID NO:16.

30. (Original) A chimeric molecule of claim 25, wherein said VH chain has the sequence of SEQ ID NO:21.

31. (Original) A chimeric molecule of claim 25, wherein said VL chain has the sequence of SEQ ID NO:20 and said VH chain has the sequence of SEQ ID NO:21, except that, optionally, said VL chain has a cysteine in place of glycine at position 100 and said VH chain has a cysteine in place of arginine at position 44, as these positions are numbered according to the "Kabat Numbering" shown in Figures 2 and 3, respectively.

32. (Original) A chimeric molecule of claim 25, wherein said antibody is selected from the group consisting of an scFv, a dsFv, a Fab, or a $F(ab')_2$.

33. (Original) A chimeric molecule of claim 25, wherein the therapeutic moiety is selected from the group consisting of a cytotoxin, a drug, a radioisotope, or a liposome loaded with a drug or a cytotoxin.

34. (Original) A chimeric molecule of claim 33, wherein the therapeutic moiety is a cytotoxin selected from the group consisting of ricin A, abrin, ribotoxin, ribonuclease, saporin, calicheamycin, a mutated diphtheria toxin, a mutated *Pseudomonas* exotoxin A ("PE"), and botulinum toxins A through F.

35. (Original) A chimeric molecule of claim 34, wherein said mutated PE is selected from the group consisting of PE35, PE38, PE38KDEL, PE40, PE4E, and PE38QQR, optionally in which said mutated PE has a glycine, alanine, valine, leucine, or isoleucine residue rather than an arginine residue at a position corresponding to position 490 of SEQ ID NO:24.

36. (Original) A chimeric molecule of claim 25, wherein said arginine residue at a position corresponding to position 490 of SEQ ID NO:24 is replaced by alanine.

37. (Original) A composition comprising (a) a pharmaceutically acceptable carrier and (b) a chimeric molecule comprising an antibody conjugated or fused to a therapeutic moiety or a detectable label, wherein said antibody specifically binds CD22, said anti-CD22 antibody has a variable light (VL) chain comprising three complementarity determining regions

(CDRs), and a variable heavy (VH) chain comprising three CDRs, further wherein (i) said VL chain CDR1 has a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18, and 19.

38. (Original) A composition of claim 37, wherein said VL CDR1 has the sequence of SEQ ID NO:7 and said VH CDR3 has the sequence of SEQ ID NO:16.

39. (Original) A composition of claim 37, wherein the therapeutic moiety is selected from the group consisting of a cytotoxin, a drug, a radioisotope, or a liposome loaded with a drug or a cytotoxin.

40. (Original) A composition of claim 37, wherein the therapeutic moiety is a cytotoxin selected from the group consisting of ricin A, abrin, ribotoxin, ribonuclease, saporin, calicheamycin, diphtheria toxin or a cytotoxic subunit or mutant thereof, a mutated *Pseudomonas* exotoxin A ("PE"), and botulinum toxins A through F.

41. (Original) A composition of claim 40, wherein said PE is selected from the group consisting of PE35, PE38, PE38KDEL, PE40, PE4E, and PE38QQR, and optionally, said mutated PE has a glycine, alanine, valine, leucine, or isoleucine residue rather than an arginine residue at a position corresponding to position 490 of SEQ ID NO:24.

42. (Original) A composition of claim 41, wherein said arginine residue at a position corresponding to position 490 of SEQ ID NO:24 is replaced by alanine.

43. (Original) An isolated nucleic acid encoding an antibody that specifically binds CD22, said anti-CD22 antibody has a variable light (VL) chain comprising three

complementarity determining regions (CDRs), and a variable heavy (VH) chain comprising three CDRs, further wherein (i) said VL chain CDR1 has a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18, and 19.

44. (Original) An isolated nucleic acid of claim 43, wherein said VL CDR1 has the sequence of SEQ ID NO:7 and said VH CDR3 has the sequence of SEQ ID NO:16.

45. (Original) A nucleic acid of claim 43, wherein said VL chain has the sequence of SEQ ID NO:20 and said VH chain has the sequence of SEQ ID NO:21, except that, optionally, said VL chain has a cysteine in place of glycine at position 100 and said VH chain has a cysteine in place of arginine at position 44, as these positions are numbered according to the "Kabat Numbering" shown in Figures 2 and 3, respectively.

46. (Original) A nucleic acid of claim 43, further wherein said nucleic acid encodes a polypeptide which is a therapeutic moiety or a detectable label.

47. (Original) A nucleic acid of claim 46, further wherein said therapeutic moiety is a mutated *Pseudomonas* exotoxin A ("PE") selected from the group consisting of PE35, PE38, PE38KDEL, PE40, PE4E, and PE38QQR, and optionally, said mutated PE has a glycine, alanine, valine, leucine, or isoleucine residue rather than an arginine residue at a position corresponding to position 490 of SEQ ID NO:24.

48. (Original) An expression vector comprising a promoter operably linked to a nucleic acid encoding an antibody that specifically binds CD22, said anti-CD22 antibody has a variable light (VL) chain comprising three complementarity determining regions (CDRs), and a variable heavy (VH) chain comprising three CDRs, further wherein (i) said VL chain CDR1 has

a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18, and 19.

49. (Original) An expression vector of claim 48, further wherein said nucleic acid encodes a polypeptide which is a therapeutic moiety or a detectable label.

50. (Original) A method of inhibiting growth of a CD22+ cancer cell by contacting said cell with a chimeric molecule comprising (a) an antibody that binds to CD22, said anti-CD22 antibody has a variable light (VL) chain comprising three complementarity determining regions (CDRs), and a variable heavy (VH) chain comprising three CDRs, further wherein (i) said VL chain CDR1 has a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18, and 19 and, (b) a therapeutic moiety,
wherein, following said contacting, said therapeutic moiety inhibits growth of said cell.

51. (Original) A method of claim 50, further wherein said VL CDR1 has the sequence of SEQ ID NO:7 and said VH CDR3 has the sequence of SEQ ID NO:16.

52. (Original) A method of claim 50, wherein said VL chain has the sequence of SEQ ID NO:20 and said VH chain has the sequence of SEQ ID NO:21, except that, optionally, said VL chain has a cysteine in place of glycine at position 100 and said VH chain has a cysteine in place of arginine at position 44, as these positions are numbered according to the "Kabat Numbering" shown in Figures 2 and 3, respectively.

53. (Original) A method of claim 50, wherein said antibody is selected from the group consisting of an scFv, a dsFv, a Fab, or a $F(ab')_2$.

54. (Original) A method of claim 50, wherein said therapeutic moiety is selected from the group consisting of a cytotoxin, a drug, a radioisotope, or a liposome loaded with a drug or a cytotoxin.

55. (Original) A method of claim 54, wherein the therapeutic moiety is a cytotoxin selected from the group consisting of ricin A, abrin, ribotoxin, ribonuclease, saporin, calicheamycin, a mutated diphtheria toxin, a mutated *Pseudomonas* exotoxin A ("PE"), and botulinum toxins A through F.

56. (Original) A method of claim 55, wherein said PE is selected from the group consisting of PE35, PE38, PE38KDEL, PE40, PE4E, and PE38QQR and, optionally, has a glycine, alanine, valine, leucine, or isoleucine residue in place of an arginine residue at a position corresponding to position 490 of SEQ ID NO:24.

57. (Original) A method of claim 56, wherein said arginine residue at a position corresponding to position 490 of SEQ ID NO:24 is replaced by alanine.

58. (Original) A method for detecting the presence of a CD22+ cancer cell in a biological sample, said method comprising:

(a) contacting cells of said biological sample with an antibody that specifically binds to CD22, said anti-CD22 antibody has a variable light (VL) chain comprising three complementarity determining regions (CDRs), and a variable heavy (VH) chain comprising three CDRs, further wherein (i) said VL chain CDR1 has a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18,

and 19,

(b) washing said cells to remove unbound antibody, and

(c) detecting the presence or absence of bound antibody,

wherein detecting the presence of said antibody indicates the presence of a CD22+ cancer cell in said sample.

59. (Original) A method of claim 58, further wherein said VL CDR1 has the sequence of SEQ ID NO:7 and said VH CDR3 has the sequence of SEQ ID NO:16.

60. (Original) A method of claim 58, further whether said antibody is attached to a detectable label.

61. (Original) A kit for detecting the presence of a CD22+ cancer cell in a biological sample, said kit comprising:

(a) a container, and

(b) an antibody that binds to CD22, said anti-CD22 antibody has a variable light (VL) chain comprising three complementarity determining regions (CDRs), and a variable heavy (VH) chain comprising three CDRs, further wherein (i) said VL chain CDR1 has a sequence selected from the group consisting of SEQ ID NOs:7, 8, 9, and 10, (ii) said VL CDR2 has the sequence of SEQ ID NO:11, (iii) said VL CDR3 has the sequence of SEQ ID NO:12, (iv) said VH CDR1 has the sequence of SEQ ID NO:13, (v) said VH CDR2 has the sequence of SEQ ID NO:14, and (vi) said VH CDR3 has a sequence selected from the group consisting of SEQ ID NOs:15, 16, 17, 18, and 19.

62. (Original) A kit of claim 61, further wherein said VL CDR1 has the sequence of SEQ ID NO:7 and said VH CDR3 has the sequence of SEQ ID NO:16.

63. (Original) A kit of claim 61, further wherein said antibody is fused or conjugated to a detectable label.